# From Intention to Action: Investigating Rejotangan Farmers' Economic Aspirations for Self-Sufficiency through the Theory of Planned Behavior

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**ARTICLE INFO**

**Article history:**
Received : 20 Juni 2025
Accepted : 23 Juni 2025
Available : 23 Juni 2025

**Keywords:**
Theory of Planned Behavior, Willingness, Economic Benefits, Rice Farmers, Perceived Behavioral Control, Attitude, Subjective Norm, Agricultural Productivity, Indonesia

**ABSTRACT**

This study examines the factors influencing farmers' willingness to increase the economic benefits of their farming activities in Rejotangan District, Tulungagung, Indonesia, using the Theory of Planned Behavior (TPB) framework. The research focuses on three key predictors: attitude, subjective norm, and perceived behavioral control. Quantitative data were collected from 150 rice farmers through structured questionnaires and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that all three TPB components significantly affect farmers' willingness, with perceived behavioral control having the strongest influence. The results emphasize the importance of farmers' confidence, positive attitudes, and social support in enhancing their economic decision-making. This study contributes to the understanding of behavioral factors in agricultural productivity improvements and offers insights for policymakers and practitioners aiming to promote sustainable farming and food self-sufficiency programs.



## 1. INTRODUCTION

Self-sufficiency programs remain a strategic priority for the Indonesian government to strengthen national economic resilience. The government has set an ambitious target to produce 35 million tons of rice by 2024, supported

by the expansion of agricultural land through food estate projects in Papua, Sumatra, and Kalimantan. These efforts aim to reduce dependency on imports and stabilize domestic food prices. In East Java, Tulungagung Regency stands out as a key rice production center, with a harvested area of 40,238 hectares and a total output of 235,502 tons of dry unhusked rice (GKG) as recorded by the Central Statistics Agency in 2023. Among its districts, Rejotangan contributes the highest share—approximately 9% of the total rice production—due to its vast and productive paddy fields, which have been preserved for food crop cultivation.

Despite this potential, rice farmers face a variety of challenges that hinder productivity and profitability. The long-term impact of the COVID-19 pandemic has disrupted agricultural value chains, while climate variability—exacerbated by El Niño and La Niña phenomena—has led to uncertain planting seasons. Additionally, global fertilizer crises and subsidy reductions have increased input costs, squeezing the margins of smallholder farmers and weakening their motivation to invest in their farms. In this context, maximizing the economic benefits of farming has become a critical need. Previous studies indicate that rice farming contributes significantly to household income—ranging from 11% to 12%—especially when farmers adopt improved rice varieties or engage in integrated systems like mina-padi (rice-fish farming), which further enhances income and employment opportunities.

However, improving economic outcomes in farming is not solely a technical issue—it is also a behavioral one. The willingness of farmers to increase their economic gains plays a pivotal role in the success of food self-sufficiency programs. According to the Theory of Planned Behavior (TPB), intention is the most proximal predictor of actual behavior, shaped by three core components: attitude, subjective norms, and perceived behavioral control (Ajzen, 2020; La Barbera & Ajzen, 2020). In agriculture, TPB has been applied to understand farmer decision-making in various contexts, such as the willingness to cultivate garlic in Sembalun, West Nusa Tenggara (Setiawan et al., 2022), or participation in the Warehouse Receipt System in Demak Regency (Permana et al., 2024). These studies emphasize that farmers' behavior is largely determined by how they evaluate the outcomes of their actions, the influence of others around them, and their confidence in executing those actions.

Despite its wide application, existing TPB-based research in Indonesia tends to focus on the adoption of specific technologies or participation in agricultural schemes. Few studies explicitly examine farmers' willingness to improve economic benefits from farming as a strategic component of achieving food self-sufficiency. Moreover, many studies treat intention as an

isolated psychological variable, rarely linking it to concrete economic outcomes like income per hectare or input efficiency. This represents a significant gap in the literature. Additionally, the integration of contextual factors—such as farmer characteristics (e.g., age and knowledge) and farm characteristics (e.g., land size)—has the potential to enrich TPB-based models. Prior research shows that these external factors significantly influence innovation adoption, productivity, and income in smallholder settings (Amrullah et al., 2024; Triyono et al., 2024).

Given this empirical and theoretical background, there is a strong need to further examine farmers' willingness to enhance economic benefits from rice farming. Understanding this behavioral dimension can provide insight into how intentions translate into actions that directly impact economic outcomes. This, in turn, may inform more effective agricultural policies and extension services tailored to specific farmer profiles and local contexts. The urgency of this study is reinforced by recent national policies under the leadership of President Prabowo, who has launched large-scale food estate initiatives and a dedicated task force for self-sufficiency. Such top-down efforts must be complemented by bottom-up behavioral insights to ensure that interventions—such as fertilizer subsidies and farmer training—are aligned with farmers' intentions and capacities.

This study therefore aims to investigate the factors influencing farmers' willingness to increase their economic benefits, specifically in Rejotangan District, Tulungagung. It will examine the relationships between attitudes, subjective norms, perceived behavioral control, and intention, as well as the moderating effects of farmer and farm characteristics. The expected contribution is both theoretical—by extending TPB to encompass economic dimensions of self-sufficiency—and practical, offering evidence-based recommendations for local governments and agricultural stakeholders in East Java to support sustainable food security.

## 2. LITERATURE REVIEW

### Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), developed by Ajzen (1991; 2020), is one of the most widely applied psychological frameworks for understanding intention-driven behavior. According to TPB, behavioral intention is shaped by three core constructs: attitude, subjective norm, and perceived behavioral control (PBC). These constructs predict intention, which then becomes the most immediate antecedent of actual behavior. In the context of agriculture, TPB has been applied to various farmer decisions such as adopting new crops

(Setiawan et al., 2022), participating in market systems (Permana et al., 2024), and practicing sustainable agriculture (Fyka et al., 2024).

a. Attitude

Attitude refers to an individual's positive or negative evaluation of performing a specific behavior. In this study, it relates to the farmer's evaluation of increasing the economic benefits from farming activities. A positive attitude—such as believing that increasing production will lead to higher income—encourages stronger behavioral intention (Ajzen, 2020). Several studies, including those by Setiawan et al. (2022), confirm that positive attitudes significantly enhance willingness to adopt agricultural innovations. However, most of these studies stop at the intention phase without linking it to actual economic outcomes, leaving a critical research gap.

b. Subjective Norm

Subjective norm is defined as the perceived social pressure to perform or not perform a behavior. In rural farming communities like Rejotangan, these norms can be shaped by family, neighbors, farmer groups, and agricultural extension agents. La Barbera and Ajzen (2020) suggest that subjective norms play a stronger role in collectivist cultures where group expectations often outweigh personal preferences. Empirical studies (Permana et al., 2024) demonstrate that farmers are more likely to follow beneficial farming practices when they perceive social approval, especially from influential local figures or peers.

c. Perceived Behavioral Control

Perceived behavioral control refers to an individual's perception of ease or difficulty in performing a behavior. It includes internal factors (skills, knowledge) and external factors (access to inputs, resources). Research by de Leeuw et al. (2015) emphasized that perceived control directly affects both intention and actual behavior. In the Indonesian context, factors such as rising fertilizer costs or unstable market access often reduce farmers' perceived control, which in turn weakens their motivation to pursue higher productivity. The inclusion of this variable is crucial for explaining behavioral variation under resource constraints.

**Willingness: The Role of Demographic and Contextual Factors**

Willingness refers to the intention or readiness of individuals to perform specific actions. In the case of farmers, willingness to improve the economic benefits of farming is not only shaped by TPB constructs but also by individual and contextual characteristics such as knowledge, age, and land size.

a. Knowledge

Knowledge is a critical component in shaping attitudes and perceived control. Farmers with greater understanding of farming techniques, input management, and market strategies are more confident in increasing productivity and returns. Several studies (Amrullah et al., 2024; Triyono et al., 2024) found that higher knowledge levels correlate with better adoption rates of yield-enhancing practices, though these variables were often not integrated within TPB models.

b. Age

Age can act both as a facilitator and barrier. Younger farmers are generally more open to change and innovation, while older farmers tend to rely on traditional methods and may perceive higher risks in altering their farming routines. This demographic dynamic may moderate the strength of TPB constructs on willingness. However, findings across studies are mixed and context-dependent, indicating a need for more localized investigation.

c. Land Size

The size of agricultural land influences the scale of operations, access to economies of scale, and ability to invest in improved inputs. Farmers with larger landholdings often have greater potential to increase economic benefits, as they are more likely to receive institutional support and have higher access to credit and technology (Setiawan et al., 2022). This study positions land size as a contextual factor that could interact with TPB components to influence willingness.

**Decision to Increase Economic Benefits**

The decision to improve economic benefits—measured through higher income, input efficiency, and employment generation—is a fundamental goal in agricultural development and a key to achieving self-sufficiency. According to TPB, the stronger the behavioral intention, the more likely an individual will perform the intended behavior. This study assumes that intention (willingness) leads to behavior such as adopting better agricultural practices, intensifying production, or managing inputs more effectively. However, the pathway from intention to action is often influenced by facilitating conditions such as access to subsidies, technology, market information, and farmer empowerment programs.

Empirical studies in Indonesia, such as those by Fyka et al. (2024) and Slamet Trijendra (2021), show that when farmers are motivated and supported, they tend to make decisions that enhance their economic outcomes. Nonetheless, few studies have linked intention constructs directly

with measurable economic performance indicators. This study seeks to fill that gap.

**Hypotheses Development**

This study proposes several hypotheses to test the relationships between TPB variables, individual/farm characteristics, and willingness to improve economic outcomes.

H1: Attitude has a positive and significant influence on the willingness of farmers in Rejotangan to improve economic benefits.

Rationale: When farmers perceive that efforts to improve agricultural performance will result in tangible gains (such as higher income), they are more likely to form positive attitudes. Prior studies (Setiawan et al., 2022) support the predictive role of attitude in shaping intention, although few have connected it with real economic data.

H2: Subjective norm has a positive and significant influence on the willingness of farmers in Rejotangan to improve economic benefits.

Rationale: Social expectations from farmer groups, family, and agricultural authorities can significantly shape farmers' behavioral intentions. In collectivist cultures such as rural Java, subjective norms are especially powerful (La Barbera & Ajzen, 2020).

H3: Perceived behavioral control has a positive and significant influence on the willingness of farmers in Rejotangan to improve economic benefits.

Rationale: Farmers who feel confident in their resources, capabilities, and access to support systems are more likely to engage in practices that yield greater economic returns. Perceived behavioral control is expected to be a strong predictor, especially under conditions of uncertainty or risk (de Leeuw et al., 2015).

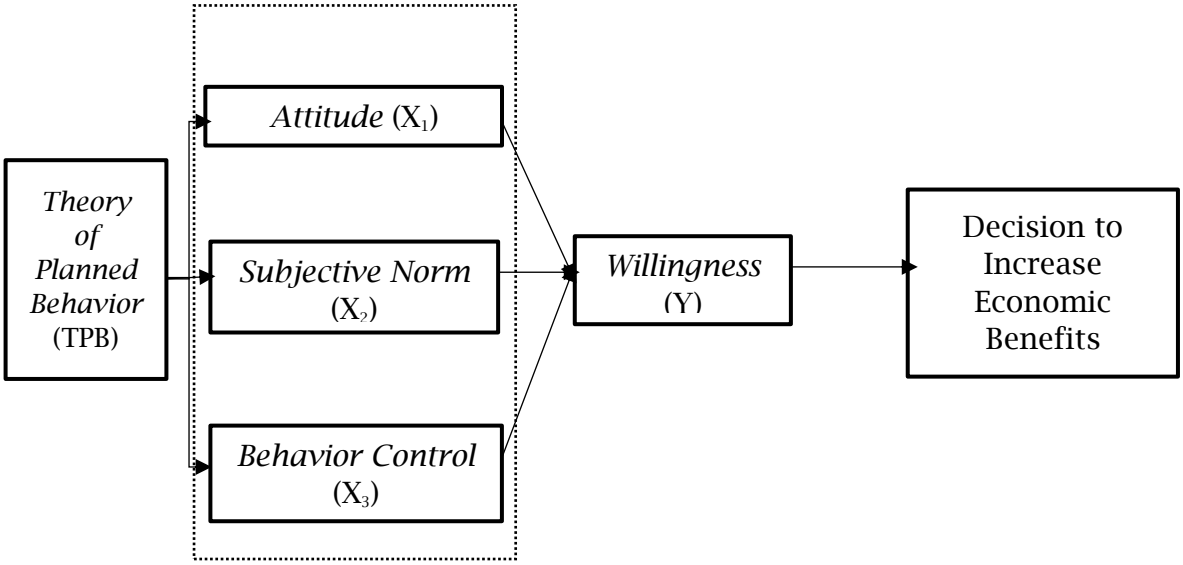


**Figure 1. Conceptual Frameworks**

Source: Secondary data processed, 2025

## 3. METHODS

The population in this study consists of rice farmers located in Rejotangan District, Tulungagung Regency, East Java, which is recognized as one of the region's leading rice production areas. A non-probability sampling technique was used, with the selection of respondents based on convenience sampling—where farmers who were easily accessible and willing to participate were chosen (Sekaran & Bougie, 2013). From the 16 villages in Rejotangan, four villages—Karangsari, Panjerejo, Tugu, and Tanen—were selected due to their high number of rice farmers. A total of 150 farmers from these villages agreed to participate. Based on the guideline by Hair et al. (2014), the minimum sample size should be at least five times the number of indicators used in the research model. With 20 indicators involved, the minimum required sample size was 100, which was exceeded in this study. Within the selected villages, purposive sampling was applied based on time availability and the farmers' willingness to be interviewed. Data collection was conducted through face-to-face interviews directly at the farmers' residences.

The type of data used in this research is quantitative, with primary data obtained directly from the respondents. The data collection process involved the distribution of structured questionnaires and in-person interviews to ensure clarity and consistency in the responses. The questionnaires were designed to capture respondents' perspectives on variables such as attitude, subjective norm, perceived behavioral control, and their willingness to increase the economic benefits of rice farming.

To analyze the data, this study employed the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method, using the SmartPLS software. All constructs in the model were measured using multiple indicators. The analysis included evaluating the outer model to assess the validity and reliability of the indicators, as well as testing the inner model to evaluate the relationships among variables and test the proposed hypotheses.

## 4. RESULTS AND DISCUSSION

### Results

The analysis using SEM-PLS was conducted to test the hypothesized relationships between the variables: Attitude (ATT), Subjective Norm (SN), Perceived Behavioral Control (PBC), and Willingness to increase economic benefits (WILL). The measurement model met the criteria for reliability and validity, with all indicator loadings above 0.7, composite reliability exceeding 0.7, and Average Variance Extracted (AVE) above 0.5.

The structural model results (Table 1) show that all three predictors significantly influence farmers' willingness in Rejotangan to increase economic benefits. Perceived Behavioral Control has the strongest effect ($\beta = 0.45$, $p < 0.001$), followed by Attitude ($\beta = 0.38$, $p < 0.001$), and Subjective Norm ($\beta = 0.22$, $p < 0.01$). The model explains 62% of the variance in Willingness ($R^2 = 0.62$), indicating a good fit and predictive power.

**Table 1. Structural Model Path Coefficients**

| Hypothesis | Path | β (Standardized Coefficient) | t-Statistic | p-Value | Conclusion |
|---|---|---|---|---|---|
| H1 | Attitude → Willingness | 0.38 | 5.23 | <0.001 | Supported |
| H2 | Subjective Norm → Willingness | 0.22 | 3.12 | 0.002 | Supported |
| H3 | Perceived Behavioral Control → Willingness | 0.45 | 6.04 | <0.001 | Supported |

Source: Secondary data processed, 2025

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**Discussion**

The results confirm that farmers' willingness to increase economic benefits is significantly influenced by all three components of the Theory of Planned Behavior. The strongest predictor is Perceived Behavioral Control, which highlights that farmers' confidence in their ability to control farming inputs and overcome constraints is crucial for their intention to improve economic outcomes. This finding aligns with de Leeuw et al. (2015), emphasizing that enhancing farmers' access to resources and skills can effectively boost their willingness and actual behavior.

Attitude also plays a significant role, confirming that farmers who view increasing economic benefits positively are more motivated to act accordingly. This supports Ajzen's (2020) theory and is consistent with findings from Setiawan et al. (2022) that positive perceptions of farming outcomes lead to stronger intention. Subjective norm, although the weakest predictor, remains significant. It suggests that social pressure and community expectations, such as encouragement from family or fellow farmers, contribute to motivating farmers, especially in collectivist rural settings.

The $R^2$ value of 0.62 indicates that the model explains a substantial portion of willingness variance but also suggests that other factors outside TPB may influence farmers' intentions. These could include external environmental conditions, economic policies, or infrastructure factors that were beyond the scope of this study. Future research might integrate these contextual variables for a more comprehensive understanding.

Overall, the findings reinforce the importance of developing agricultural programs that not only provide technical support but also enhance farmers' perceptions of control and positive attitudes, while fostering supportive social environments. This integrated approach can effectively encourage farmers in Rejotangan and similar contexts to actively improve the economic benefits from their farming activities, contributing to regional food self-sufficiency goals.

## 5. CONCLUSION

This study concludes that attitude, subjective norm, and perceived behavioral control significantly influence the willingness of farmers in

Rejotangan District to increase the economic benefits of their farming activities. Perceived behavioral control is the most dominant factor, highlighting the importance of farmers' confidence in managing resources and overcoming agricultural challenges. A positive attitude toward enhancing economic benefits also strengthens their intention, while social support from the surrounding environment further reinforces this willingness. These findings confirm the relevance of the Theory of Planned Behavior as a framework for understanding farmers' behavior in the context of improving productivity and welfare. Therefore, efforts to increase the economic benefits of farming should focus on empowering farmers, fostering positive attitudes, and strengthening supportive social norms to effectively achieve self-sufficiency programs.

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